U.S. 10/560,630

DECLARATION in accordance with 37 CFR 1.132

I, the undersigned Yariv Siman-Tov, DVM, a citizen of Israel residing in Israel hereby declare as follows:

1) I hold a D.V.M. degree from Parma University. I am currently employed as the Head of the Pre-Clinical Research Unit of Assaf Harofeh Medical Center Zriffin, Israel.

2) I am familiar with the method for removing pigments from a pigmented section of skin described in U.S. Application No. 10/560,163. I have been asked to give an opinion on the use of table salt (NaCl) as a substance for treating wounds.

3) Background
Common salt which is known as an ionic compound is a solid crystal consisting of ions of chlorine and cations of nitrate arranged in an ionic weave, i.e. a dense cubic package, in which each ion is surrounded by 6 ions having an opposing charge.

Beyond the known uses as common salt and as a means for preserving food products, the human body requires the components of salt. Nitrate (Na^+) provides a relative balance between the acids and bases in the body, regulates the volume of liquids in the body (blood pressure), and serves to transfer nerve signals. The chlorine ion (Cl^-) serves to form hydrochloric acid in the stomach.

4) Common Salt in Contact with Skin Wounds
There are those who describe common salt as a substance which, at one or another concentration, may bring about sterilization of a skin wound. However, without doubt, the facts that healing a wound is not recommended and may even cause actual damage can be learned from the labels on common salt supplied for medical uses. These facts can also be learned from the numerous researches which have categorically proven that the use of NaCl for the purpose of healing wounds does not improve the healing of the tissues being treated and may even cause a delay in healing.

If we overlook for a moment the fact that "pouring salt on wounds" has been known since ancient times as an act which causes extreme pain and relate solely to the central question of the use of common salt (NACl) as a substance for treating wounds one thing can be said: common salt is defined in the documentation of all entities which supply materials in the field of medicine within the framework of a Material Safety Data Sheet (MSDS) document as material which may cause irritation of the skin and contact with it even necessitates flushing the area with flowing water to dilute the concentration of

common salt. Companies like Sigma Aldrich (document attached) state in their data sheets describing NaCl:

> Dermal Exposure: In case of contact, immediately wash skin with soap and copious amounts of water.
>
> Skin Absorption: May be harmful if absorbed through the skin.

Other companies, for instance Ambion (document attached), publish similar warnings.

In a research paper which was published in 1989 by a group of scientists in Japan (Aichi Gakuin Daigaku Shigakkai Shi) which examined the influence of NaCl on the healing process of a wound, in comparison with two other substances, it was shown that the healing process of the wound when using common salt was the slowest and the level of fibroblasts which were produced during the healing process of the wound after the use of common salt, was much lower explaining why the healing process of the wound is slower. (A copy of this research is attached.)

5) Conclusion

According to my clinical experience and based on the extent of my knowledge of most of the scientific sources and methods of treatment which exist, I am able to say quite clearly that not only is it not obvious to use common salt for the purpose of healing wounds and treating them but such use may even result in phenomenon that slow down the natural healing processes. This is the real reason that this material is not in use as a medication for healing wounds and is also not included as an active ingredient of such medicines.

6) The name and signature below are my name and signature.

This 22 day of February, 2009

Yariv Siman-Tov

MATERIAL SAFETY DATA SHEET

Date Printed: 02/28/2007
Date Updated: 02/01/2006
Version 1.12

Section 1 - Product and Company Information

Product Name	SODIUM CHLORIDE ACS REAGENT
Product Number	S9888
Brand	SIAL
Company	Sigma-Aldrich
Address	3050 Spruce Street SAINT LOUIS MO 63103 US
Technical Phone:	800-325-5832
Fax:	800-325-5052
Emergency Phone:	314-776-6555

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
SODIUM CHLORIDE	7647-14-5	No

Formula NaCl
Synonyms Common salt * Dendritis * Extra Fine 200 Salt * Extra Fine 325 Salt * Halite * H.G. blending * Natriumchlorid (German) * Purex * Rock salt * Saline * Salt * Sea salt * Table salt * Top flake * USP sodium chloride * White crystal
RTECS Number: VZ4725000

Section 3 - Hazards Identification

HMIS RATING
HEALTH: 0
FLAMMABILITY: 0
REACTIVITY: 0

NFPA RATING
HEALTH: 0
FLAMMABILITY: 0
REACTIVITY: 0

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

INHALATION EXPOSURE
If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

DERMAL EXPOSURE
In case of contact, immediately wash skin with soap and copious

amounts of water.

EYE EXPOSURE
In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

FLASH POINT
N/A

AUTOIGNITION TEMP
N/A

FLAMMABILITY
N/A

EXTINGUISHING MEDIA
Suitable: Noncombustible. Use extinguishing media appropriate to surrounding fire conditions.

FIREFIGHTING
Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment. This may include self-contained breathing apparatus to protect against the hazardous effects of the normal products of combustion or oxygen deficiency
Specific Hazard(s): Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

PROCEDURE(S) OF PERSONAL PRECAUTION(S)
Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust.

METHODS FOR CLEANING UP
Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

HANDLING
User Exposure: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE
Suitable: Keep tightly closed.

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS
Safety shower and eye bath. Mechanical exhaust required.

PERSONAL PROTECTIVE EQUIPMENT
Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or

type P1 (EN 143) dust masks.
Hand: Protective gloves.
Eye: Chemical safety goggles.

GENERAL HYGIENE MEASURES
Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

Appearance: Physical State: Solid

Property	Value	At Temperature or Pressure
Molecular Weight	58.44 AMU	
pH	7	
BP/BP Range	1,413 °C	
MP/MP Range	801 °C	
Freezing Point	N/A	
Vapor Pressure	1 mmHg	865 °C
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
SG/Density	2.165 g/cm3	
Bulk Density	N/A	
Odor Threshold	N/A	
Volatile%	N/A	
VOC Content	N/A	
Water Content	N/A	
Solvent Content	N/A	
Evaporation Rate	N/A	
Viscosity	N/A	
Surface Tension	N/A	
Partition Coefficient	N/A	
Decomposition Temp.	N/A	
Flash Point	N/A	
Explosion Limits	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Refractive Index	N/A	
Optical Rotation	N/A	
Miscellaneous Data	N/A	
Solubility	Solubility in Water:Soluble. Other Solvents: 36G/100ML @ 20 °C	

N/A = not available

Section 10 - Stability and Reactivity

STABILITY
Stable: Stable.
Materials to Avoid: Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS
Hazardous Decomposition Products: Sodium/sodium oxides, Hydrogen chloride gas.

HAZARDOUS POLYMERIZATION
Hazardous Polymerization: Will not occur

Section 11 - Toxicological Information

ROUTE OF EXPOSURE
Skin Contact: May cause skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.
Eye Contact: Sodium chloride (NaCl) in contact with eyes can cause irritation or redness due to abrasion.
Inhalation: May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.
Ingestion: May be harmful if swallowed.

SIGNS AND SYMPTOMS OF EXPOSURE

Ingestion of large amounts causes vomiting and diarrhea. Dehydration and congestion may occur in internal organs. Hypertonic salt solutions can produce inflammatory reactions in the gastrointestinal tract.

TOXICITY DATA

Oral
Rat
3000 mg/kg
LD50

Inhalation
Rat
> 42,000 mg/m3
LC50

Oral
Mouse
4000 mg/kg
LD50

Intraperitoneal
Mouse
2602 MG/KG
LD50

Subcutaneous
Mouse
3 GM/KG
LD50

Intravenous
Mouse
645 MG/KG
LD50

Intracervical
Mouse
131 MG/KG
LD50

Skin
Rabbit
> 10000 mg/kg
LD50

IRRITATION DATA

Skin
Rabbit
50 mg
24H
Remarks: Mild irritation effect

Skin
Rabbit
500 mg
24H
Remarks: Mild irritation effect

Eyes
Rabbit
100 mg
Remarks: Mild irritation effect

Eyes
Rabbit
100 mg
24H
Remarks: Moderate irritation effect

Eyes
Rabbit
10 mg
Remarks: Moderate irritation effect

CHRONIC EXPOSURE - TERATOGEN

Species: Rat
Dose: 1710 MG/KG
Route of Application: Intraperitoneal
Exposure Time: (13D PREG)
Result: Specific Developmental Abnormalities: Musculoskeletal system. Effects on Embryo or Fetus: Fetal death. Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

Species: Mouse
Dose: 1900 MG/KG
Route of Application: Subcutaneous
Exposure Time: (11D PREG)
Result: Effects on Embryo or Fetus: Fetal death.

Species: Mouse
Dose: 1900 MG/KG
Route of Application: Subcutaneous
Exposure Time: (10D PREG)
Result: Specific Developmental Abnormalities: Musculoskeletal system.

Species: Mouse
Dose: 2500 MG/KG
Route of Application: Subcutaneous
Exposure Time: (10D PREG)
Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

CHRONIC EXPOSURE - MUTAGEN

Species: Human
Dose: 125 MMOL/L
Cell Type: fibroblast
Mutation test: DNA inhibition

Species: Rat

Route: Oral
Dose: 16800 MG/KG
Exposure Time: 4W
Mutation test: Unscheduled DNA synthesis

Species: Rat
Route: Oral
Dose: 400 MG/KG
Mutation test: Other mutation test systems

Species: Rat
Route: Intraperitoneal
Dose: 2338 MG/KG
Mutation test: Cytogenetic analysis

Species: Mouse
Dose: 101 MMOL/L
Cell Type: lymphocyte
Mutation test: DNA damage

Species: Mouse
Dose: 57200 UMOL/L
Cell Type: lymphocyte
Mutation test: Mutation in mammalian somatic cells.

Species: Hamster
Dose: 4 GM/L
Cell Type: lung
Mutation test: Micronucleus test

Species: Hamster
Dose: 275 MMOL/L
Cell Type: ovary
Mutation test: DNA damage

Species: Hamster
Dose: 160 MMOL/L
Cell Type: ovary
Mutation test: Cytogenetic analysis

Species: Hamster
Dose: 7500 MG/L
Cell Type: lung
Mutation test: Cytogenetic analysis

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Species: Woman
Dose: 27 MG/KG
Route of Application: Intraplacental
Exposure Time: (15W PREG)
Result: Effects on Fertility: Abortion.

Species: Rat
Dose: 145 GM/KG
Route of Application: Oral
Exposure Time: (7D PRE/1-22D PREG)
Result: Effects on Newborn: Delayed effects.

Species: Rat
Dose: 56400 MG/KG
Route of Application: Oral

Exposure Time: (5D PRE-21D POST)
Result: Effects on Newborn: Biochemical and metabolic. Maternal Effects: Postpartum.

Species: Rat
Dose: 10 GM/KG
Route of Application: Intraperitoneal
Exposure Time: (17-20D PREG)
Result: Effects on Newborn: Behavioral.

Species: Rat
Dose: 10 MG/KG
Route of Application: Parenteral
Exposure Time: (1D PRE)
Result: Maternal Effects: Ovaries, fallopian tubes.

Species: Rat
Dose: 500 MG/KG
Route of Application: Intrauterine
Exposure Time: (4D PREG)
Result: Effects on Fertility: Pre-implantation mortality (e.g., reduction in number of implants per female; total number of implants per corpora lutea).

Species: Rat
Dose: 50 MG/KG
Route of Application: Intrauterine
Exposure Time: (6D PREG)
Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).

Species: Mouse
Dose: 13440 MG/KG
Route of Application: Subcutaneous
Exposure Time: (2-6D PREG)
Result: Effects on Fertility: Abortion.

Species: Monkey
Dose: 6 GM/KG
Route of Application: Intrauterine
Exposure Time: (18W PREG)
Result: Effects on Fertility: Abortion.

Species: Horse, donkey
Dose: 480 MG/KG
Route of Application: Intraplacental
Exposure Time: (45D PREG)
Result: Effects on Embryo or Fetus: Fetal death. Maternal Effects: Other effects. Endocrine:Estrogenic.

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION
Small amounts may be washed down the drain with excess water. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT
Proper Shipping Name: None
Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA
Non-Hazardous for Air Transport: Non-hazardous for air transport.

Section 15 - Regulatory Information

UNITED STATES REGULATORY INFORMATION
SARA LISTED: No
TSCA INVENTORY ITEM: Yes

CANADA REGULATORY INFORMATION
WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
DSL: Yes
NDSL: No

Section 16 - Other Information

DISCLAIMER
For R&D use only. Not for drug, household or other uses.

WARRANTY
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Section 1-Identification of Product

Catalog Number: 9759, 9760G, 9760G3	For research use only.	Health: 1 Firc: 0 Stability: 0

Synonyms:

Contact Information

Ambion, Inc 2130 Woodward St. Austin, TX 78744-1832 Tel: +1 512 651 0200 US Toll-free Tel: 800 888 8804 E-mail: techserv@ambion.com Web address www.ambion.com

Ambion (Europe) LTD Huntingdon, Cambidgeshire UK PE29 6XY Tel: +44 (0)1480 373 020 Fax: +44 (0)1480 373 010 E-mail: eurotech@ambion.com Web address: www.ambion.com

Emergency Contact: In Europe, call 112. In USA, call 911

Section 2-Composition/Information

Hazardous Ingredients (Specific)	%	CAS #	R-Statement	S-Statement
Sodium Chloride	29	7647-14-5	R:36/37/38	S:36/37/39

Section 3-Hazard Identification

Routes of Entry

Skin Contact	May irritate damaged skin.
Skin Absorption	Absorption can occur with effects similar to those via ingestion.
Eye Contact	Causes irritation, redness, and pain. (For salt concentrations greater than the normal saline present.)
Inhalation	May cause mild irritation to the respiratory tract.
Ingestion	Very large doses can cause vomiting, diarrhea, and prostration. Dehydration and congestion occur in most internal organs. Hypertonic salt solutions can produce violent inflammatory reactions in the gastrointestinal tract.

[Emergency Overview]

WARNING! CAUSES EYE IRRITATION.

WHMIS Symbols

N.A.

[Potential Health Effects]

Poison by intraperitoneal and intracervical routes. Moderately toxic by ingestion, intravenous, and subcutaneous routes. An experimental teratogen. Human systemic effects by ingestion: blood pressure increase. Human reproductive effects by intraplacental route: terminates pregnancy. Experimental reproductive effects. Human mutation data reported. A skin and eye irritant. When bulk sodium chloride is heated to high temperature, a vapor is emitted that is irritating, particularly to the eyes. Ingestion of large amounts of sodium chloride can cause irritation of the stomach. Improper use of salt tablets may produce this effect. Potentially explosive reaction with dichloromaleic anhydride + urea. Electrolysis of mixtures with nitrogen compounds may form the explosive nitrogen trichloride. Reaction with burning lithium forms the dangerously reactive sodium. The molten salt at 1100° reacts explosively with water. Violent reaction with BrF3. When heated to decomposition it emits toxic fumes of Cl^- and Na2O.

Section 4-First Aid Measures

Skin Contact	Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes
Eye Contact	Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.
Inhalation	Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Ingestion	Never give anything by mouth to an unconscious person. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water. Get medical aid if irritation or symptoms occur.

Section 5-Fire Fighting Measures

Flammable	Non flammable.
Means of Extinction	Use any means suitable for extinguishing surrounding fire.
Flashpoint (°C) and Method	Not Tested
Upper Flammable Limit (% by volume)	Not Tested
Lower Flammable Limit (% by volume)	Not Tested
Autoignition Temperature (°C)	Not Tested
Explosion Data – Sensitivity to Impact	Not Tested
Explosion Data – Sensitivity to Static Discharge	Not Tested

EXHIBIT B

Hazardous Combustion Products	When heated to decomposition it emits toxic fumes of Cl^- and Na2O.
NFPA	Health: 1 Fire: 0 Stability: 0

Section 6-Accidental Release Measures

Leak and Spill Procedures

Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as sawdust. Do not flush to sewer!

Section 7-Handling and Storage

Handling Procedures and Equipment	Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.
Storage Requirements	Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances.

Section 8-Exposure Control/Personal Protection

Exposure Limits	
ACGIH TLV	Not Listed
OSHA PEL	Not Listed
Other (specify)	N.A.
Engineering Controls (specific)	
General	Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.
Local Exhaust	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.
Other	N.A.
Personal Protective Equipment (specific)	
Gloves	Wear impervious gloves.
Respirator	A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.
Eye	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Maintain eye wash fountain and quick-drench facilities in work area.
Footwear	Wear closed toe shoes.
Clothing	Wear appropriate protective clothing to prevent skin exposure.
Other	N.A

Section 9-Physical and Chemical Properties

Physical State	Liquid
Odor and Appearance	Clear
Odor Threshold (ppm)	Not Tested
Specific Gravity	Not Tested
Vapor Density (Air=1)	Not Tested
Vapor Pressure (mmHg)	Not Tested
Evaporation Rate	Not Tested
Boiling Point (°C)	Not Tested
Freezing Point (°C)	Not Tested
pH	Not Tested
Coefficient of Water/Oil Distribution	Not Tested
[Solubility in Water]	Not Tested

Section 10-Stability and Reactivity

Chemical Stability	Stable under ordinary conditions of use and storage. Hygroscopic.
Incompatible with other substances	Lithium, bromine trifluoride.
Reactivity	Not Tested

Hazardous Decomposition Products	When heated to above 801C (1474F) it emits toxic fumes of chloride and sodium oxide.

Section 11-Toxicological Information

Acute Effects	Irritation
Chronic Effects	Not Tested
Irritancy of Product	Irritating to the eyes, respiratory system and skin.
Skin Sensitization	Not Tested
Respiratory Sensitization	Not Tested
LD_{50}	Oral rat: 3000 mg/kg
LC_{50}	Inhalation rat: > 42 gm/m3 /1H

Carcinogenicity

IARC (1,2A, or 2B)	Not Listed
ACGIH (A1, A2, or A3)	Not Listed
Reproductive Toxicity	Not Listed
Teratogenicity	Not Listed
Embryotoxicity	Not Listed
Mutagenicity	Not Listed
Name of Synergistic Products/Effects	Not Listed

Section 12-Ecological Information

Aquatic Toxicity	Not Tested

Section 13-Disposal Considerations

Waste Disposal	Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

Section 14-Transport Information

Special Shipping Information

PIN	Not Listed
TDG	Not Listed
[DOT]	Not Listed
[IMO]	Not Listed
[ICAO]	Not Listed

Section 15-Regulatory Information

[WHMIS Classification]	Not Listed
[OSHA]	Not Listed
[SARA]	Not Listed
[TSCA]	Not Listed
R:36/37/39	Irritating to eyes, respiratory system and skin.
S:36/37/39	Wear suitable protective clothing, gloves and eye/face protection.

Section 16-Other Information

This bulletin is for your guidance and is based upon information and tests believed to be reliable. Ambion makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages thereto. The data are offered solely for your consideration, investigation, and verification. These suggestions should not be confused with state, municipal, or insurance requirements, or with national safety codes and constitute no warranty. Any use of these data and information must be determined by the user to be in accordance with applicable federal, state, and local regulations.

1: Aichi Gakuin Daigaku Shigakkai Shi. 1989 Mar;27(1):277-316. Links

[Effect of caffeine or NaCl on wound healing of the rat gingiva. Light and electron microscopic studies]

[Article in Japanese]

Takesue M.

The present study was carried out to investigate histological and ultrastructural changes, particularly changes of the epithelium-connective tissue junction, in rat gingival wounds treated with Caffeine or NaCl. Light Microscopy The animal had an incision in the lingual gingiva of lower incisors. Immediately after incision, the wounds of Groups A, B and C were treated with distilled water, caffeine (2.5%) and NaCl (25%), respectively. The gingivae were examined histologically at 1, 2, 4, 6, 8, 12 and 28 days after treatment. Electron Microscopy Groups a, b and c received the same treatment as those of Groups A, B and C, respectively. The gingivae were examined ultrastructurally at 4 and 28 days after treatment. 1. Light Microscopic Observations (1) Group A. On all experimental days, the wounds were covered by the epithelium. At 1 and 2 days, the connective tissues exhibited depositions of fibrin, but, at 4, 6 and 8 days, they showed the granulation tissues. At 12 and 28 days, the connective tissues appeared normal. (2) Group B. On all experimental days, the wounds were covered by the epithelium. At 1 and 2 days, the connective tissues exhibited depositions of fibrin. At 4, 6 and 8 days, they displayed granulation tissues. At 12 and 28 days, the connective tissues appeared normal. (3) Group C. On all experimental days, the wounds were covered by the epithelium. At 1 and 2 days, the connective tissues exhibited depositions of fibrin. At 4, 6, 8 and 12 days, they displayed granulation tissues. At 28 days, the connective tissue was normal. (4) Histometrically, at 6 days, Groups A, B and C exhibited the highest, intermediate and lowest number of fibroblasts per unit area, respectively. There were no differences in the number of inflammatory cells between all three groups. 2. Electron Microscopic Observations (1) Group a. At 4 days, the normally-formed gingival basal lamina was observed rather frequently just beneath the basal surfaces of basal cells. On occasions, the basal lamina exhibited various changes such as detachments, breaks, thickenings and duplications. Moreover, absence of the basal lamina was observed. At 28 days, the irregular types of basal laminae decreased in number, and most of the basal laminae appeared normal in structure. (2) Group b. At 4 days, the normally-formed gingival basal lamina was observed less frequently as compared with those of Group a. The above-mentioned various changes of the basal lamina were found rather frequently.(ABSTRACT TRUNCATED AT 400 WORDS)

PMID: 2610305 [PubMed - indexed for MEDLINE]

EXHIBIT C